REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1-41 were pending in the present patent application. By way of this reply, claims 4, 14, 15, 26-31, and 37-39 have been cancelled without prejudice or disclaimer. Accordingly, claims 1-3, 5-13, 16-25, 32-36, 40 and 41 are currently pending in the present application. Claims 1, 16, 32, and 40 are independent. The remaining claims depend, either directly or indirectly, from claims 1, 16, 32, and 40.

Claim Amendments

Claims 1-3, 5-13, 16, 18, 25, 32, 34, and 40 have been amended for clarification. No new matter has been added by way of these amendments, as support for these amendments may be found, for example, in Figure 1 and in paragraphs [0020], [0030] and [0031] in the specification.

Rejections under 35 U.S.C. § 101

Claims 1-15, 26-31, and 37-39 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. By way of this reply, claims 4, 14, 15, 26-31, and 37-39 have been cancelled, and accordingly, the rejections of these claims are moot. With respect to the remaining claims, for the reasons set forth below, this rejection is respectively traversed.

The Examiner asserts that independent claim 1 is non-statutory because it is directed to a computer system comprising instructions. (*See* Office Action dated January 26, 2005 at page 2). By way of this reply, independent claim 1 has been amended to be an independent method claim. Specifically, amended independent claim 1 recites a method for determining a worst case aggressor *set* of a victim net and then using the result to perform noise analysis of the victim net. It is clear to one skilled in the art that this results in a tangible, useful, and concrete result: improved simulations

of at least a portion of an integrated circuit. Thus, Applicant respectfully asserts that amended independent claim 1 is directed to statutory subject matter and has utility. Amended claims 2, 3, and 5-13 are dependent, either directly or indirectly, from amended independent claim 1, and are allowable for at least the same reason. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 1-13, 16-18, 21-29, 32-34 and 37-41 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,128,769 (hereinafter "Carlson"). By way of this reply, claims 4, 26-29, and 37-39 have been cancelled, and accordingly, the rejections of these claims are moot. With respect to the remaining claims, for the reasons set forth below, this rejection is respectively traversed.

For anticipation under 35 U.S.C. §102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. Applicant respectfully asserts that Carlson does not teach or suggest each and every limitation recited in amended independent claims 1, 16, 32, and 40.

Independent claims 1 and 16 have been amended to clarify that a logically exclusive set is one in which "at most one net…switches at a given time." Independent claims 32 and 40 have been similarly amended. Although Carlson purportedly discloses dividing potential attacker signals (hereinafter "aggressor nets") into subsets based upon *logic* relationships (column 7, lines 61-63), Carlson fails to show or suggest the use of a set of aggressor nets in which "at most one aggressor net….switches at a given time."

Further, Applicant respectfully asserts the purpose of logic filtering in Carlson is to divide aggressor nets into subsets based upon logic relationships and to exclude aggressor nets or subsets of aggressor nets *with no potential of interfering* with a victim net (column 7, lines 45-50 and lines 55-58). The disclosure of logic filtering by Carlson does not show or suggest the use of logically exclusive sets as recited in the amended claims of the present invention. In addition, Carlson teaches dividing the

potential aggressor nets into subsets based upon logic relationships and using this information as part of the timing filtration and logic filtration processes (Figure 1). Then, of the potential aggressor subsets that remain following the filtration processes, sum the cross-coupling capacitance values ("Delta C Values") of all the individual aggressor nets in each subset and *pick the subset with the greatest sum as the worst case aggressor set* (Figure 1).

In contrast, the present invention recites dividing the potential aggressor nets into logically exclusive sets. Individual aggressor nets are extracted from these logically exclusive sets (*e.g.*, using a bipartite graph) *to form the worst case aggressor set*, such that the sum of the cross-coupling capacitance values of the individual aggressor nets in the worst case aggressor set produces a "pessimistically accurate," *i.e.*, is equal to or slightly greater than, real worst case noise value. (*See, e.g.*, Instant Specification at [0026] and [0042]).

Thus, it is clear that amended independent claims 1, 16, 32, and 40 are patentable over Carlson. Claims 2, 3, 5-13, 17, 18, 21-25, 33, 34, and 41 depend, either directly or indirectly, from amended claims 1, 16, 32, and 40 and are allowable for at least the same reason. Accordingly, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 14, 15, 19, 20, 30, 31, 35, and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Carlson. By way of this reply, claims 14, 15, 30, and 31 have been cancelled, and accordingly, the rejections of these claims are moot. For the reasons set forth below, this rejection is respectfully traversed.
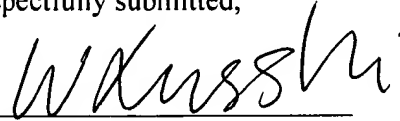
As discussed above, Carlson fails to disclose all the limitations of amended independent claims 1, 16, 32, and 40. Accordingly, dependent claims 19, 20, 35 and 36 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 03226/110001; P6194).

Dated: March 15, 2005   Respectfully submitted,

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Attachments